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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/651,226	08/30/2000	Arun K. Gupta	102157-100	2299

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WIGGIN & DANA LLP
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EXAMINER

SPIEGEL, MICHAEL A

ART UNIT	PAPER NUMBER
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2175

DATE MAILED: 01/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/651,226

Applicant(s)

GUPTA, ARUN K.

Examiner

Michael A Spiegel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 8-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 8-16 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DIANE D. MIZRAHI
PRIMARY PATENT EXAMINER
TECHNOLOGY CENTER 2100

DETAILED ACTION***Election/Restrictions***

1. Newly submitted Claims 8-16 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 1-7 (Group I) are directed to as method for extracting data from a database, which is classified as database art (Class 707). Claims 8-16 (Group II) includes similar features to the invention claimed in Group I, however the inventive step of Group II comprises modeling business activities, as claimed in Claim 8. Thus Group II would be more appropriately classified as a business method (Class 705). Conducting a new search through this class would create an undue burden on the examiner. Therefore, a restriction has been deemed appropriate in this case.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, Claims 8-16 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

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Claim Rejections - 35 USC § 112

2. In view of the amendments made to Claims 1-5, the 112 2nd paragraph rejection and objections made in the prior office action have been withdrawn.

Response to Arguments

3. Applicant's arguments filed 11/7/02 have been fully considered but they are not persuasive.

With respect to the argument beginning on page 5 regarding the 103 rejection, Applicant states that the proposed combination of Sheffield in view of Goldberg fails to teach the limitation "generating executable code from specified data elements for extracting said specified data elements from said operational database," as claimed in Independent Claim 1. Furthermore, the object behavior taught by Goldberg requires a mechanism to invoke or initiate behavior, as shown in the given citations.

Examiner respectfully disagrees. The claim limitation "generating executable code from specified data elements for extracting said specified data elements from said operational database," does not specify that there is no need for a invoking or initiating mechanism for code generation. In fact, the claim is sufficiently vague in the relationship between "generating

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executable code" and "specified data elements" as to allow a myriad of interpretations. The claim is silent as to how the code is generated, where it is stored, and how the code is executed. This vagueness would allow, in the broadest reasonable interpretation, the given invention to read on a simple relational database copying data from one table to another. The format of the data itself would cause various type-specific routines to be called, generated and executed when copying the data to another table.

Examiner decided to take a conservative approach closer to the spirit of the invention and read "generating executable code from specified data elements" as being closer to an Object Oriented type system. Hence, the use of the Goldberg reference, which teaches that data (state) can be stored together with the code necessary to interact with said data (behavior). Goldberg teaches that among these behaviors are data input and output, i.e. data extraction and storage (Goldberg, Fig. 3, 326).

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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5. Claim 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheffield (U.S. 5,832,431) in view of Goldberg (U.S. 5,907,847) and further in view of Medl (U.S. 6,108,004).

Claim 1, 1st modification, Sheffield in view of Goldberg

As to Claim 1, Sheffield discloses a method for extracting desired data for metric analysis¹, the method comprising the steps of:

1) specifying desired data elements to be extracted from an operational database (see Col. 3, lines 12-15, and also see Fig. 21, where Sheffield teaches how a programmer may use an SQL statement or a GUI to specify one or more database tables and columns within those tables, thus selecting the desired data elements.);

2) executing the executable code thereby extracting the specified data elements from the operational database (see Col. 3, lines 21-23 where Sheffield teaches how the specified data elements may be selected and extracted and see Col. 4, lines 17-

¹ Note that the phrase "for metric analysis" is an intended use of the invention and does not constitute a structural feature. Thus the phrase is not given patentable weight. See MPEP 707.07(f)

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22 where Sheffield teaches how code or "commands" are executed to retrieve the data from the operational database).²

Sheffield does not teach that executable code is generated from the identified data elements. Rather, Sheffield discloses an interface object that resides between a client application and a database manager, which contains all the code ("methods" or "commands") necessary to perform such functions as data extraction.

Goldberg teaches that that executable code is generated from the data elements and discloses a method in which an object's state and behavior may be coupled in a database management system. (See Fig. 5A, 504 and Col. 8 lines 36-39). Goldberg defines an object's state as being: "determined by the set of values an object carries for a set of properties or variables. A property can be an attribute of the object or a relation between the object and one or more other objects," and an object's behavior as being "defined by the set of operations that can be performed with the object. Each operation is

² Examiner uses Applicant's definition of an operational database as a database "typically designed to support all the business needs of an enterprise" (see instant application, p. 2, lines 28-30) in contrast to a staging database which is used only to store data extracted in the process of data mining from an operational database. (See instant application, p. 3, lines 9-12.) Examiner considers any database mentioned in the prior art as being an operational database, unless it is specified as being a staging database, as per Applicant's definition.

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implemented in a routine that is referred to as a method. An object can include a plurality of methods. An operation is performed by invoking one of the object's methods." (See Goldberg, Col 1, lines 23-32)

Goldberg further teaches how an object's behavior may be stored with its state as methods (Fig. 3) and how these methods may be used to generate code for all relevant operations on the object's state (See Fig. 5A, 504 and Col. 8 lines 36-39).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the data extraction method of Sheffield to include the generation of executable code from the identified data elements for extracting the identified data elements from the database.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the data extraction method of Sheffield to include the generation of executable code from the identified data elements for extracting the identified data elements from the database for the following reasons:

a) so that the state and behavior of the object are stored reliably in the Database Management System (DBMS) in a single location such that a modification can be made to both state and behavior in one transaction ;

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- b) so that when an object is extracted or replicated both its state and its behavior can be transferred securely and reliably; and
- c) so that platform independent code can be generated from the object itself without additional modification when the object is extracted and stored in another environment (as taught by Goldberg at Col. 6, lines 6-13; Col. 7, lines 33-48).

Claim 1, 2nd modification, Sheffield as modified in view of Med1

Sheffield as modified does not teach that the executable code stores the extracted data elements in a staging database.

Med1 teaches data mining and storing data in a staging database. (See Col. 7, lines 33-48. Note that Applicant defines "staging database" as one used in data mining; Med1 discloses a database used in data mining. Therefore, staging database reads on: a database used in data mining as disclosed by Med1 at Col. 7, lines 3-48.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Sheffield as modified wherein: the executable code stores the extracted data elements in a staging database.

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It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Sheffield as modified by the teaching of Medl because employing the use of a staging database to store data elements would allow the data elements to be used in data mining applications as data mining is a well known and useful technique for recognition of patterns such as profit, efficiency, and inventory.

As to Claim 2, Sheffield as modified teaches a method wherein the step of specifying includes identifying attributes (i.e. data type, data name, etc., Sheffield, Fig. 20, 214 & 216) and processes related to the desired data elements (Sheffield, Fig. 23).

As to Claim 3, Sheffield as modified discloses that the operational database is relational. (See Sheffield, Col. 2 line 60 - Col. 3 line 4; Goldberg, Col. 8, lines 28-29. Also see footnote to Claim 1 for discussion on operational and staging databases.)

As to Claim 4, Sheffield as modified discloses that the staging database is relational. (See Sheffield, Col. 2 line 60 -

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Col. 3 line 4; Goldberg, Col. 8, lines 28-29. Also see footnote to Claim 1 for discussion on operational and staging databases.)

As to Claim 5, Sheffield as modified discloses that identifying the data elements attributes and processes is performed utilizing a graphical user interface. (See Sheffield, Fig. 1, 20a; Fig 5; Fig 21)

As to Claim 6, Sheffield as modified teaches a method wherein the step of identifying includes deriving rules (e.g. data validation, Sheffield, Fig. 14) for extracting the desired data elements from graphical representations (i.e. GUI, Sheffield, Fig. 4) and manually defined values of attributes and processes (Sheffield, Fig. 21, 222; Fig. 23; Fig. 8, 22b) related to the desired data elements.

As to Claim 7, Sheffield as modified teaches a method wherein the step of executing includes invoking a background process for extracting and storing the specified data elements (i.e. batch processing, Sheffield, Col. 3, lines 44-51).

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Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A Spiegel whose telephone number is 703-305-7605. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be


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reached on 703-305-3830. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



Michael Spiegel
Patent Examiner
Technology Center 2100
January 21, 2003



DIANE D. MIZRAHI
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